REMARKS

The Office Action mailed February 21, 2007 has been received and reviewed. Claims 1-20 are pending and are rejected. Claims 1, 8, 13, 17 and 20 are amended. The Applicants submit that the claims are in condition for allowance for the reasons stated further below.

Rejection Of Claims 17 And 20 Under 35 U.S.C. § 102(b)

Claims 17 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by USP 3,771,915 ("Back"). The rejection is overcome by clarifying amendment of claims 17 and 20. As amended, claims 17 and 20 require a submersible pump having an angled face on the discharge outlet the slope of which is angled toward the pump inlet at that point of the angled face with is in closest proximity to the pump inlet and being unsupported by the guide rail bracket. Back discloses a wedge or seal plate (16) which is not only supported by the guide rail bracket or frame (25), but which is angled away from the pump inlet at that point of the wedge which is closest to the pump inlet. Therefore, claims 17 and 20 are not anticipated by Back.

Rejection Of Claims 1 And 13 Under 35 U.S.C. § 103

Claims 1 and 13 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5,529,462 ("Hawes") in view of USP 4,902,204 ("Hofstad"). The Examiner states that Hawes discloses a submersible pump having the claimed elements, but does not disclose the claimed elements taught by Hofstad, which include a pump inlet, base housing with plurality of guide members on which the pump is mounted and being arranged to facilitate solids entrainment. The Examiner asserts that it would have been obvious to combine those elements with Hawes. The rejection is overcome by clarifying amendment of the claims. Claim 1 recites a submersible pump having a pump discharge outlet that is positioned for connection to a stationary discharge pipe opening that is located in the bottom of a sump pit or tank. Hawes is directed to a submersed pump system that eliminates any stationary discharge piping to which the

submersed pump must be connected at or near the bottom of a sump pit or tank and provides instead a flexible, movable suction pipe extending from the discharge outlet of the pump to a disconnection point at the top of the sump pit or tank. (See column 1, lines 51-55.) Consequently, Hawes expressly teaches away from a submersible pump having a "downhole" disconnect system to a stationary discharge pipe opening as required by claim 1.

Additionally, the Applicants submit that neither Hawes nor Hofstad teach a pump distribution plate as suggested by the Examiner. Rather, Hawes discloses a pump mounting device having small legs located in the corners of the mounting device distanced from the pump inlet and, therefore, unable structurally or positionally to direct fluid or solids to the pump inlet as required by claims 1 and 13. Hofstad discloses a pump casing (2) having a lower portion (8) the outside of which bears radially-extending legs. Nothing about lower portion (8) is mistakable as a plate, as claimed, and particularly not a linear plate as required by claim 13. The lower portion (8) does not have an opening for receiving an inlet of the pump; rather, the lower portion (8) itself defines the inlet of the pump. Moreover, the legs of the lower portion (8) of Hofstad do not extend from a bottom surface of a plate as required by claims 1 and 13 to position the pump inlet from the bottom of a sump pit or tank, nor do the legs direct fluids and solids toward the pump inlet to facilitate entrainment as claimed. Therefore, Hofstad does not teach a pump distribution plate as claimed, and what is considered by the Examiner to be equivalent to the claimed plate is actually a pump casing that could not be substituted or added to the Hawes pump and remain operable.

In summary, not only does Hawes teach away from the present invention, but any presumed combination of the features of Hofstad with the Hawes pump could not obviate claims 1 and 13 since the structures and functions required by claims 1 and 13 are not taught by Hofstad.

Rejection Of Claims 2, 3, 14 And 15 Under 35 U.S.C. § 103

Claims 2, 3, 14 and 15 are rejected under 35 U.S.C. § 103 as being

unpatentable over Hawes in view of Hofstad, and further in view of USP 3,771,915 ("Back"). The Examiner states that Hawes in view of Hofstad discloses the invention as asserted with respect to claims 1 and 13, but do not disclose the claimed elements disclosed by Back, including a discharge outlet and discharge piping having an angled opening (FIG. 7) and a disconnect system comprising an angled face (69) surrounding the pump discharge outlet for assuring mating and sealing of the pump discharge outlet to the angled opening, and a discharge elbow stand (44, 18) configured with an angled opening and being secured to the base plate (20) and discharge piping (10, 12). The rejection is traversed. For the reasons stated above with respect to claims 1 and 13, Hawes expressly teaches away from a submersible pump having a "downhole" disconnection system and fails the teach a pump distribution plate as claimed. Further, Hofstad does not teach a distribution plate as recited by claims 1 and 13 (nor does it disclose a pump discharge outlet as claimed.) Therefore, even if Hawes could be combined with Hofstad, which the Applicants do not concede that they are combinable, the resulting combination would still not obviate claims 2, 3, 14 and 15. Moreover, Back fails to disclose a discharge pipe that has an angled face as required by claims 2, 3, and 15. Thus, the combination of references fails to establish a *prima facie* case of obviousness since not all claimed elements are disclosed by the references.

Rejection Of Claims 4, 5 And 16 Under 35 U.S.C. § 103

Claims 4, 5 and 16 are rejected under 35 U.S.C. § 103 as being unpatentable over Hawes, Hofstad and Back, and further in view of USP 5,030,346 to McEwan. The Examiner states that Hawes, Hofstad and Back disclose the claimed elements, except for a centering member (44) positioned within at least one opening in a pump distribution plate (30) for receiving a pump inlet (68), as taught by McEwan. The Applicants are unclear as to the claimed elements in claims 4, 5 and 16 which are found in Back. Nonetheless, the rejection is traversed/overcome for the reasons stated above. Specifically, Hawes expressly teaches away from a submersible pump having a downhole disconnection system as required by claims 1 and 13, and Hofstad fails to

teach a pump distribution plate as claimed, thereby making any combination of Hofstad with Hawes not only structurally impossible but also impossible to obviate what is claimed. The Applicants particularly note that, for the sake of argument, if the lower portion (8) of the pump casing of Hofstad is considered to be a distribution plate as claimed, there would be no need for a centering member as claimed because the lower portion (8) of the pump actually defines the pump inlet. In other words, the pump inlet and alleged pump distribution plate are one in Hofstad and no centering member would be needed to facilitate the receipt of the pump inlet on the distribution plate as required by claims 4, 5 and 16. Therefore, the references do not teach or suggest that which is claimed; indeed, Hawes teaches away from that which is claimed, and the references cannot be combined to obviate that which is recited in claims 4, 5 and 16.

Rejection Of Claim 6 Under 35 U.S.C. § 103

Claim 6 is rejected under 35 U.S.C. § 103 as being unpatentable over Hawes, Hofstad, Back, McEwan and further in view of USP 3,018,925 to Englesson, which teaches a guide rail system with rail (29) as a guide rail bracket (33) connected to a submersible pump (10). The rejection is traversed/overcome for the same reasons stated above with respect to the inability of the cited references to obviate claims 1, 4 and 5. Additionally, it is noted that Hawes does not teach a system having a means for raising and lowering a submersible pump into a sump pit thereby requiring a downhole discharge disconnect system as claimed; Hawes is directed to avoiding disconnection of the pump downhole so that the pump is merely lowered into the pit on a pump mounting device. There is no suggestion that the pump of Hawes should be coupled with a rail system enabling raising and lowering of the pump. Likewise, Hofstad provides no teaching of a rail system for raising the motor and rotor portions of that pump. Accordingly, Hawes provides no such teaching, but actually teaches away from associating a rail system with a submersible pump. Therefore, even if Englesson ('925) discloses a rail bracket, the teachings of Englesson are not combinable with Hawes to obviate claim 6.

Rejection Of Claim 7 Under 35 U.S.C. § 103

Claim 7 is rejected under 35 U.S.C. § 103 as being unpatentable over Hawes, Hofstad, Back, and further in view of Englesson, which teaches a guide rail system with guide rails (22), a guide rail bracket (28), connected to a discharge elbow stand (23) and positioned to guide movement of a pump into or out of a well. The rejection is traversed/overcome for the reasons stated above with respect to the non-obviousness of claims 1, 2 and 3. Specifically, Hawes teaches away from the claimed invention by expressly teaching away from a downhole disconnect system which, concomitantly, eliminates the need for providing any kind of guide rail system for raising and lowering the pump. Indeed, Hawes teaches only a pump mounting device for mounting and lowering the pump into a pit where it may stay since disconnection of the discharge pipe is provided above the pit or tank in order to avoid downhole disconnection operations. In light of Hawes' teaching away from such downhole operations, there is no motivation to combine Hawes with a rail system. Claim 7 is not obviated therefore.

Rejection Of Claims 8, 9 And 10 Under 35 U.S.C. § 103

Claims 8, 9 and 10 are rejected under 35 U.S.C. § 103 as being unpatentable over Hawes and Hofstad, and further in view of McEwen. The Examiner states that Hawes and Hofstad fail to teach the claimed elements taught by McEwen, namely a pump having a suction side having a head plate (68) positioned on the suction side of the pump and a pump inlet being formed in said suction head plate, a centering member (44) as claimed and the centering member having an angled inner surface (54) and the pump inlet having an outer angled surface as claimed. The rejection is traversed on the grounds that, as stated previously, Hawes teaches away from that which is recited in claim 1 and that Hofstad does not teach or suggest a pump distribution plate as recited in claim 1. Additionally, however, amended claim 8 clarifies that the suction head plate is positioned between the suction side of the pump casing and the pump distribution plate, a structural arrangement that is not taught by any of the references, but is also an impossible arrangement in view of Hofstad's teaching of lower

portion (8), equated by the Examiner as being a pump distribution plate, as defining the pump inlet. Claims 8, 9 and 10 are not obviated by the cited references.

Rejection Of Claim 11 Under 35 U.S.C. § 103

Claim 11 is rejected under 35 U.S.C. § 103 as being unpatentable over Hawes, Hofstad, McEwen and Back. The Examiner states that Hawes, Hofstad and McEwen disclose the claimed invention, except for those elements taught by Back, namely discharge piping having an angled opening (FIG. 7) and a disconnect system comprising an angled face 69 surrounding the pump discharge outlet. The rejection is traversed for the reasons stated above with respect to claims 1, 8 and 9, namely that Hawes, in principal, teaches away from the claimed invention and is not combinable with the cited secondary references to obviate claim 11. Additionally, since Back discloses a system for lifting out the pump, Hawes also teaches away from the system of Back and renders the references not combinable to obviate claim 11.

Rejection Of Claim 12 Under 35 U.S.C. § 103

Claim 12 is rejected under 35 U.S.C. § 103 as being unpatentable over Hawes, Hofstad, McEwen, Back, and further in view of Oakes. The Examiner states that Hawes, Hofstad, McEwen and Back disclose the claimed invention, except for the limitations disclosed by Oakes, namely a pump discharge outlet face configured to retain a discharge seal ring (44) positioned thereabout for sealing against the opening of the discharge piping (7). The rejection is traversed for the reasons stated above with respect to claims 1, 9 and 11. Additionally, Back discloses at column 4, lines 57-67, that given the spaced arrangement of the pump relative to the wedge or seal plate, the cantilevered weight of the pump assures a seal between seal plate (16) and the receiver face plate wall (44). Oakes discloses a pump system where the pump is supported at a position opposite the discharge outlet of the pump, and the connection between the discharge outlet of the pump and the discharge piping is a vertical face. Oakes discloses that a gap (41) will be formed that must be sealed by use of a seal

member (44) that is made operative by pressure exerted on the seal by fluid being pumped through the discharge outlet and pipe. The disconnect and pump support systems (e.g., rail systems) of Back and Oakes are expressly contrary to each other in structure and function and cannot be combined as suggested. Nothing in the references provides any motivation or reasonable expectation for success in combining the two systems to obviate claim 12. Claim 12 is not obviated by the references.

Rejection Of Claim 18 Under 35 U.S.C. § 103

Claim 18 is rejected under 35 U.S.C. § 103 as being unpatentable over Back. The Examiner states that Back discloses the general conditions claimed except for the express disclosure that the angled face is between about five and about forty-five degrees to the central axis, but that it would be within the skill in the art to make an angled face as claimed. The rejection is overcome by clarifying amendment of claim 17, from which claim 18 depends. Claim 18 requires a discharge outlet on the pump that has an angled face that is angled in a direction opposite that disclosed by Back. Also, amended claim 17 requires that the angled face is distanced from and not supported by the guide rail bracket, which is contrary to what is taught by Back. The claimed invention has the benefit of enabling some amount of movement of the pump in order to assure proper seating of the pump inlet on a pump distribution plate as disclosed in the present specification, while assuring proper seating of the discharge outlet of the pump on a discharge outlet pipe. The combined rail support bracket and sealing plate of Back, provide no movement of the pump relative to the rail system and would not allow for slight movement in the pump to seat the pump inlet on a pump distribution plate. Therefore, it would not be obvious to use the system of Back in a submersible pump system of the present invention and there would be no motivation or reason to employ in the seal plate of Back the angle degrees as claimed. Claim 18 is not obviated by Back.

Rejection Of Claim 19 Under 35 U.S.C. § 103

Claim 19 is rejected under 35 U.S.C. § 103 as being unpatentable over Back, in view of Oakes. The Examiner states that Oakes teaches a submersible pump as claimed and also teaches that the face of the pump discharge outlet is configured to retain a discharge seal ring (44), and that it would have been obvious to modify the pump of Back with those elements disclosed by Oakes. The rejection is overcome by clarifying amendment of claim 17, and is otherwise traversed. As noted above, claim 17, and thus claim 19 which depends therefrom, requires a pump arrangement that is structurally distinct from the Back assemblage and enables slight movement of the pump for positioning with respect to a pump distribution plate and discharge piping. Therefore, Back teaches a structurally and functionally different arrangement of discharge pipe facing and the direction of slope of the angled face that achieve a different objective and purpose than is required in the claimed invention. Additionally, Oakes discloses a vertical face discharge outlet and discharge piping connection that is contrary in function and structure from Back, as argued with respect to claim 12, above. Thus, Back and Oakes cannot be combined to obviate claim 19.

CONCLUSION

In view of the amendments made and arguments presented, the Applicants submit that the claims are now in condition for allowance. Reconsideration and allowance are respectfully requested.

Respectfully submitted,

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